

REMARKS

The issues outstanding in the office action mailed July 7, 2003, are the objections to the claims and the rejections under 35 U.S.C §103. Reconsideration of these issues, in view of the following discussion, is respectfully requested. At the outset, the Examiner is thanked for indicating the withdrawal of all prior rejections and objections.

Claim Objections

Claims 32 and 35 have been objected to as a result of typographical errors. These errors have been corrected, as supported in the specification, for example, at page 18, line 21-22 and in EP 42,226, pages 7 and 8. Withdrawal of the objection is respectfully requested.

Rejections Under 35 U.S.C §103

Claims 2-10, 12, 17, 19-21, 23 and 25-37 (all pending claims, with the *exception* of pending claim 22) have been rejected under 35 U.S.C §103 over Casci, et. al. '754 taken with LaPierre, et. al. '530 and Hellring, et. al. '980. Reconsideration of this rejection is respectfully requested.

Casci discloses, *i.a.*, zeolite EU-1, methods of preparation of the zeolite and to some extent, processes of using the zeolite. The patent is principally directed to the zeolite and its preparation, but discloses, in a very generic sense, the following utility:

"A wide range of hydrocarbon conversion catalysts can be prepared from zeolite EU-1 by ion exchange or impregnation with cations, or oxides, selected from the following, Cu, Ag, Mg, Ca, Sr, Zn, Cd, B, Al, Sn, Pb, V, P, Sb, Cr, Mo, W, Mc, Re, Fe, Co, Ni, noble metals."

See the paragraph bridging columns 5 and 6. Patentees then continue, at column 6, that they have found zeolite EU-1 to be "especially useful" as a catalyst for xylene isomerization. Patentees subsequently disclose a "hydrocarbon conversion" process

involving isomerizing alkylbenzenes in column 6, lines 27-30. The remainder of Patentees' utility disclosure is directed to such a process. Thus, as admitted in the sentence bridging pages 3 and 4 of the office action, Casci does not disclose process conditions or specific hydro-dehydrogenating elements, much less a process for improving pour point. Further, as admitted in the office action, Casci does not disclose the amount of the zeolite in relation to the total amount of zeolite plus matrix, does not disclose claimed feeds, and does not disclose that a portion of element T is removed to achieve a claimed Si/T ratio. It is respectfully submitted that the *reason* the reference fails to suggest the parameters enumerated in the sentence bridging pages 3 and 4 of the office action is that the patent is not directed to, and does not disclose, processes for improving pour point of a feed comprising paraffins. Instead, Casci is principally directed to xylene isomerizations. Indeed, it is submitted that xylene isomerization is the significant focus of the patent, with the only real broader disclosure being the brief mention at column 7, lines 22-25 of the patent, that zeolite EU-1 "may also find applications in the separation of aromatics and cycloparaffins, and in pollution control by its ability to remove organic contaminants from aqueous effluents." Even if such a disclosure were suggestive of the present claims, the speculative aspect ("may") would undercut such a teaching. In any event, it is evident that the patent utterly fails to suggest a method of improving pour point, as noted.

Thus, it would *not* have been obvious to have "modified the process of Casci by utilizing the conditions of LaPierre because these conditions are effective for the desired isomerization of Casci," as argued at page 5 of the office action, principally because the process of Casci is nonanalogous to that of LaPierre, which discloses isomerization of paraffins with various zeolites. See La Pierre at column 1, lines 10 and 11, and column 2, lines 34-59. The "desired isomerization" of Casci, one of isomerization of xylenes, is *not* equivalent to the paraffin isomerization of LaPierre.

For these reasons - nonanalogousness of the processes - it would equally not have been obvious for one of ordinary skill in the art to extract the zeolite of Casci for use in the process of LaPierre, regardless of whether EU-1 is zeolite is taught to be equivalent to

ZSM-50 zeolite, disclosed as but one of a variety of alternatives in LaPierre. Although Hellring is cited for its alleged disclosure of equivalence of ZSM-50 and EU-1 zeolites, one of ordinary skill in the art would not combine the above noted disclosures in view of their widely divergent processes. Moreover, as discussed in the previous response, even if EU-1 and ZSM-50 have similar structures, this does not mean that the zeolites have the same catalytic properties and are the same. In fact, EU-1 and ZSM-50, although arguably possessing the same framework topology, exhibit different product selectivity, perhaps due to the distribution of active Brönsted acid sites. It will also be recalled that Applicants have previously submitted a declaration under 37 C.F.R. 1.132, demonstrating that ZSM-50 zeolite, prepared with a given structuring agent, is less effective for reducing the pour point of a paraffin feed compared to a catalyst employing zeolite EU-1, prepared in accordance with EP 42,226. Thus, it is submitted that Hellring does *not* teach complete equivalence of ZSM-50 and EU-1 in *any* use to which either catalyst may be put, and the disclosure of EU-1 in a process for xylene isomerization such as Casci does not suggest use of the zeolite in place of ZSM-50 in a different process such as isomerization of paraffins, as in LaPierre.

Indeed, it is known in the art of catalysis that the choice of hydro-dehydrogenating element, and the amount of zeolite (a critical factor in acidity) can have an unpredictable result on catalytic performance of a bifunctional catalyst. Thus, neither modifying the process of Casci by adjusting the amount of zeolite and specific hydro-dehydrogenating elements, nor modifying the process of LaPierre by changing the zeolite, is obvious to one of ordinary skill, as modifying these parameters would not have predictably produced an improved result.

Accordingly, it is submitted that the combination of references fails to suggest the present claims, and withdrawal of this rejection is respectfully requested.

Claim 22 has also been rejected under 35 U.S.C §103 over Casci, taken with LaPierre and Hellring, further in view of Sonnemans, et. al. '414. Sonnemans is cited for its disclosure of phosphorous in a dewaxing catalyst. However, Sonnemans does not remedy the above-discussed deficiencies, and thus is submitted that this rejection should

also be withdrawn.

Accordingly, the claims in the application are submitted to be in condition for allowance, and passage to issue is respectfully requested. Should the Examiner have any questions or comments, he is cordially invited to telephone the undersigned at the number below.

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,



Harry B. Shubin, Reg. No. 32,004
Attorney/Agent for Applicant(s)

MILLEN, WHITE, ZELANO
& BRANIGAN, P.C.
Arlington Courthouse Plaza 1, Suite 1400
2200 Clarendon Boulevard
Arlington, Virginia 22201
Telephone: (703) 243-6333
Facsimile: (703) 243-6410

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